



Underlayment Joint Show Through



You install the underlayment and the flooring and leave the installation feeling satisfied you did a great job. Then, several days later the customer calls complaining the joints in the underlayment showing through the vinyl flooring. What could have possibly happened? There are some factors that can cause this.

Storage of the underlayment must be in an environment that is similar to the environment in which it will be installed. This will allow the moisture content to either increase or decrease to correspond with the humidity of that area. Acclimation of the underlayment is critical. Underlayments are susceptible to moisture movement as much as hardwood flooring. If the underlayment is stored in a controlled environment, and you take it out and install it in a new construction site, the underlayment will take on the excess subfloor moisture and grow and force the underlayment to grow. Test the subfloor for moisture using a wood pin meter. The subfloor should not exceed 13% and the underlayment should be no more than 3% difference from the subfloor.

Lightly butt the edges lightly of the underlayment panels together. All underlayment manufacturers have recommended patterns for fastening. You generally find a closer pattern on panel edges than in the field. Fasteners should not be longer than the combined thickness of the underlayment and subfloor combined. When a fastener blows through the subfloor the holding power of the fastener is minimized. The fastener should be kept to within 1/4"-3/8" of the underlayment edge to prevent the edges from peaking. Stagger the nailing pattern to prevent a wavy effect. The Engineered Wood Association suggests a diagonal fan pattern. The nailing should start at the corner of the two butted sides and work across to the open ends to prevent any fullness from being nailed into the panel. Each panel should be fastened entirely, before proceeding to the next panel.

There are many opinions as to how to prep the joints of underlayment. I lightly butt and sand the underlayment joints smooth. I patch very little unless absolutely necessary for the occasional joint. When patch is used and an adhesive is applied, the growth of the underlayment will cause the panels to expand and push the patch up. Even though it is only pushed up slightly, it could be enough to show through the finished floor. Flash patching all the underlayment joints just adds more moisture and potential growth to the underlayment board. Always allow an expansion zone around the perimeter of the room. Never fit the underlayment tightly wall to wall.

Adhesives also add water to the underlayment. All adhesives manufacturers have specific trowel notching for their adhesives. Allowing the proper open time also plays an important role. Install a piece of vinyl backed flooring into freshly troweled adhesive and you are forcing the underlayment to absorb all the moisture from the adhesive, as the vinyl backing will absorb none. Open time allows the moisture to start to flash off the adhesive, and allows the adhesive to develop tack rather than letting the moisture be trapped under the material. Using the correct trowel notching and allowing the proper adhesive open time for the flooring, play an important role.

In remodel, the underlayment can be installed over existing flooring. This application prevents moisture from happening from beneath the underlayment. If you are experiencing moisture problems during remodel, chances are moisture has been introduced into the underlayment during the installation.

- How was the underlayment stored?
- How long was it acclimated?
- Have you recorded the moisture test results for both the underlayment and substrate?
- How was the underlayment fastened to the subfloor?
- Were underlayment joints sanded flush, or filled with patching compound?
- Was the adhesive is applied with the proper notched trowel and adequate open time is given to the adhesive?

The best case is to eliminate all possibilities of excess moisture from being absorbed into the underlayment.